R E P O R T  R E S U M E S

ED 016 974 48 AL 001 114

THE PERCEPTION OF GENERAL AMERICAN ENGLISH BY SPEAKERS OF SOUTHERN DIALECTS.

BY- LANE, HARLAN AND OTHERS
MICHIGAN UNIV., ANN ARBOR,CTR.FOR RES.LANG.AND BEH

REPORT NUMBER BR-6-1784 PUB DATE 67
CONTRACT OEC-3-6-061784-0508
EDRS PRICE MF-$0.25 HC-$0.52 11P.

DESCRIPTORS- *DIALECT STUDIES, *ENGLISH, *SOUTHERN STATES, *NEGRO DIALECTS, *NONSTANDARD DIALECTS, CULTURAL DIFFERENCES, STANDARD SPOKEN USAGE, AUDITORY PERCEPTION, AUDITORY TESTS, PERCEPTION TESTS, ALABAMA, GENERAL AMERICAN ENGLISH (GAE),

RECENT LINGUISTIC RESEARCH SHOWS THAT THE SPEECH PATTERNS OF SOUTHERN NEGROES CONSTITUTE A LEGITIMATE DIALECT OF ENGLISH WITH PHONOLOGICAL AND GRAMMATICAL RULES SOMEWHAT DIFFERENT FROM GENERAL AMERICAN ENGLISH (GAE). AN EXPERIMENT WAS DESIGNED TO DETERMINE WHETHER THOSE ASPECTS OF THE NEGRO DIALECT WHICH SET IT APART FROM OTHER ENGLISH DIALECTS LEAD TO DIFFERENCES IN SPEECH PERCEPTION, AS WELL AS TO THE DIFFERENCES NOTED IN SPEECH PRODUCTION. PHONETICALLY-BALANCED WORD LISTS AND SENTENCES WERE TAPE-RECORDED BY TWO NATIVE SPEAKERS OF GENERAL AMERICAN ENGLISH AND PLAYED TO 25 NEGRO AND 16 CAUCASIAN UNIVERSITY STUDENTS IN ALABAMA. EACH STUDENT WAS ASKED EITHER TO REPEAT OR WRITE DOWN WHAT HE HEARD FROM THE TAPE RECORDINGS. THE MEAN SCORE FOR THE NEGRO STUDENTS WAS CONSISTENTLY LOWER THAN FOR THE CAUCASIAN STUDENTS UNDER ALL TEST CONDITIONS AND BOTH GROUPS PERFORMED LESS WELL THAN LISTENERS WHO WERE NATIVE SPEAKERS OF GAE. THUS, IT APPEARS THAT SPEAKERS OF THE SOUTHERN NEGRO DIALECT COMMIT MORE ERRORS WHEN ATTEMPTING TO CORRECTLY PERCEIVE GAE THAN DO CAUCASIAN STUDENTS FROM THE SAME GEOGRAPHIC AREA AND OF THE SAME SOCIAL AND ECONOMIC LEVEL. THIS REPORT APPEARS IN "STUDIES IN LANGUAGE AND LANGUAGE BEHAVIOR, PROGRESS REPORT NO. IV" OF THE CENTER FOR RESEARCH ON LANGUAGE AND LANGUAGE BEHAVIOR, UNIVERSITY OF MICHIGAN, CITY CENTER BUILDING, 220 EAST HURON STREET, ANN ARBOR, MICHIGAN 48108. (AUTHOR/JD)

DOCUMENT FILMED FROM BEST AVAILABLE COPY

ED016974

# The Perception of General American English by Speakers of Southern Dialects[1]

Harlan Lane, Lawrence Caroline, and Charles Curran
Center for Research on Language and Language Behavior

Recent linguistic research has shown that the speech patterns of southern Negroes constitute a legitimate dialect of English with grammatical (including phonological) rules somewhat different from General American English (GAE). The present experiment was designed to examine the possibility that those aspects of the Negro dialect which set it apart from other English dialects lead to differences in speech perception, as well as to the differences previously noted in speech production. Five phonetically-balanced word lists and two sets of phonetically-balanced sentences were tape-recorded by two speakers of General American English and played to groups of Negro and Caucasian university students in Alabama. Each S was asked to either repeat into a microphone or, under other test conditions, to write down what he heard as the lists were played to him through earphones. The mean score for the Negro students was consistently lower than for the Caucasian students under all test conditions and both groups performed less well than listeners who were native speakers of GAE. Thus, it appears that speakers of the southern Negro dialect commit more errors when attempting to correctly perceive GAE than do Caucasian students from the same geographic area and of the same socio-economic level. A phonemic analysis of the Ss' written responses suggested some of the differences in dialect between GAE and the speech of southern Negro and southern Caucasian students which may account for the more common errors in speech perception made by the Ss in the present experiment.

The speech of southern Negro youths is often regarded by their teachers (and others) as sub-standard English whose undesirable features must be corrected, often, item by item. Recently, increasing attention has been focused on the view that Negro speech patterns constitute a legitimate dialect of English with systematic rules of its own (Labov, 1964; Hurst, 1965; Levin, 1965; Shuy, 1965; Stewart, 1965). Thus, the possibility is raised of replacing the common practice of teaching General American English (GAE) as a corrective course designed to eliminate the "bad habits" of Negro speech. Instead, GAE could be taught as a second dialect, using many of the same techniques employed in the teaching of a second language. However, as Labov (1964) observes, a descriptive analysis of the linguistic behavior of any speech community must be made before appropriate tools can be devised to assist speakers within that community to learn other speech patterns.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.



AL 001 114

It would seem likely that phonological differences between the southern Negro dialect and GAE might lead to problems in the accurate perception of GAE by speakers in the Negro community for whom General American English, itself, to some unknown degree, may be an unfamiliar dialect. Preliminary data obtained by Berlin (1965) with Negro and Caucasian children suggest that such perceptual difficulties, in fact, exist. If significant perceptual difficulties are also found in more mature Ss, developing a program for teaching a second dialect of English to Negro students will require that methods be found to train speech perception as well as speech production.

The experiments reported in the present article were designed, therefore, to examine differences between Negro and Caucasian college students in their perception of GAE. Negro and Caucasian students from the same general geographic and socio-economic backgrounds in the southeastern United States were employed, along with Caucasian speakers of GAE, native to the Midwest. A preliminary phonemic analysis was also made of the misperceptions obtained in an attempt to isolate some of the systematic causes.

## Method

Subjects. Twenty Negro pre-freshmen students (ten male, ten female) from Tuskegee Institute and 16 Caucasian freshmen students (nine male, seven female) at Auburn University served as Ss. An attempt was made to match the two groups in socio-economic background. All 36 Ss received no part of their formal education in the north. High school education for both groups was restricted in location to the states of Alabama, Georgia, Florida, and Louisiana. Further, the two colleges from which the Ss were drawn are within 19 miles of each other. Three of the Caucasian Ss had one parent each who had attended, but not finished, college. No parents of the Negro Ss attended college. Finally the occupations of the parents of all Ss can be described as "blue collar".

Speakers. One male and one female, native speakers of General American English, recorded five phonetically balanced (PB) lists (Stevens & Beranek, 1942) of 50 monosyllabic words each and two PB lists of five sentences each onto a master tape. The utterances were spaced at 15-sec intervals.

Apparatus. The master tape was recorded on an Ampex tape recorder (Model 300U), and was played to each S on a Wollensak recorder (Model 1580). The Ss listened to the master tape through earphones (Telephonics, TDH 39).

A second Wollensak recorder was used to record each S's verbal responses. During testing, S was seated in a relatively sound-proof room with no one else present except the E (Auburn) or his Negro assistant (Tuskegee).

Procedure. Each S was required to perform the six tests listed below in a single hour-long session:

I. Read the five sentences aloud.
II. Read one of the lists of 50 words aloud.
III. Listen to a tape-recorded reading of a word list, and write down each word.
IV. Listen to a tape recorded reading of a word list, and utter aloud a sentence containing each word.
V. Listen to a tape-recorded reading of a list of five sentences and repeat aloud each sentence.
VI. Listen to a tape-recorded reading of a word list, and repeat aloud each word.

Each S was exposed to four of the five word lists and both sets of sentences (see Table 1). Half of the Ss proceeded in ascending order and half proceeded

---
Insert Table 1 about here
---

in descending order through the six tasks. Equal numbers heard the words and sentences read by the male and female voices. The above counterbalancing was employed in order to minimize any differences in score which might result from sex of the speaker, order of task performance, or which word list was used. Fifteen seconds were allowed on the master tape between each word or sentence, but in every case in which the S's needed more time, the E stopped the recorder until the S was ready to continue. This latter procedure was only necessary for task IV.

Scoring. Tests III, IV, and VI were designed to inspect the intelligibility of GAE, the major concern of this investigation. The scoring of these tests proceeded in the following manner. For task III, the sheets on which the Ss wrote their responses were graded by two scorers, who worked independently, and without S identifications. Whenever necessary, four grades were given: a) the lowest possible grade in which all spelling mistakes and all words difficult to read because of handwriting were marked incorrect; b) a grade which included as correct those words which appeared to be properly perceived, but incorrectly spelled; c) a grade which included as correct those words

which might or might not have been properly perceived, depending on how the handwriting was interpreted; d) the highest possible score which included as correct all words included in (b) and (c) above.

For task IV, two scorers, native speakers of GAE who had not seen the word lists, listened through earphones to the tape recordings made by the Ss, and wrote down each sentence. The scorer then graded each sentence according to the occurrence or nonoccurrence of the stimulus-word on the original word list. Whenever the scorers simply could not be certain what the student said, when syntactic and semantic constraints did not make the intended word unambiguous, that item was discarded and the final score converted. Again four grades were given when necessary: a) the lowest possible grade in which all errors of word form and all words that might or might not have been correct were counted as misperceptions by S; b) a grade which included, as correct, those sentences which contained the proper (i.e., stimulus) word, but in a different form (plural, change of tense, etc.); c) a grade which included, as correct, those words which, upon hearing, the scorers thought might be right; d) the highest possible grade which included, as correct, all work in categories (b) and (c) above.

The scoring of task VI was conducted in a fashion similar to that of task IV.

T-Tests and F-Tests were performed on the group mean data to determine the significance of the differences observed between the Tuskegee and Auburn students. An item analysis was also performed on the words missed by the Tuskegee and Auburn students in tasks III and VI. These data were then inspected for phonetic differences between what was presented and what was "heard" in order to discover phonetic features systematically misperceived.

## Results and Discussion

Table 2 presents the individual and group mean scores on task III. Only the results obtained by scorer I are shown since the results

---

Insert Table 2 about here

---

obtained by scorer II were virtually identical to those of scorer I. It can be seen that, when Ss were asked to write down monosyllabic words spoken in GAE, the Auburn students were consistently more accurate than the Tuskegee students ($t = 3.70$, $df = 34$, $p < .005$). Moreover, the variability of scores

within the Tuskegee group was significantly greater than that in the Auburn group ($F = 6.68$, $p < .005$). Observation of the individual data indicates that the greater variability of the Tuskegee group is caused by a few students who scored much lower than any other students in either the Negro or Caucasian groups. Apparently, a few of the Negro students had a great deal of difficulty in correctly perceiving GAE while the rest obtained scores only slightly lower than the mean score of the Auburn students. Varying the method of scoring the words written down by the Ss does not result in significant increases in mean score for either Negro or Caucasian students, nor does it alter the trends in the data. The maximum difference between the lowest score and the highest possible score of any single S is only four, while the greatest group mean difference is only two.

Table 3 presents the obtained individual and group scores (scorer I) on

---

Insert Table 3 about here

---

task IV, which required Ss to use each tape-recorded word in a sentence. Again the mean score of the Tuskegee students is lower than the mean score of the Auburn students ($t = 3.48$, $df = 32$, $p < .005$), although there was no significant difference in variability between the groups ($F = 1.48$, $p > .05$). It is interesting to note, however, that the Ss in both groups who did poorly on task III tended to do poorly on task IV also.

When asked in task VI (see Table 4) to repeat into a microphone a word

---

Insert Table 4 about here

---

spoken in GAE, the Tuskegee students, as a group, obtained a higher mean score than they did on tasks III and IV. The Auburn students also scored correspondingly better on task VI than did the Tuskegee students. The difference between the Tuskegee and Auburn group means is reliable ($t = 3.17$, $df = 32$, $p < .005$), as is the difference in variability ($F = 2.39$, $p < .05$); the latter is again the result of a few Tuskegee students who do quite poorly relative to the rest of the Tuskegee and Auburn students. (The data of female Ss one and two were not available for tasks IV and VI.)

The preceding findings may be compared with those obtained with native speakers of GAE as listeners. Using the same word lists read by a speaker of GAE and the same procedure as in task III, Lane (1963) found that Midwest Americans heard, on the average, 49 of the 50 words correctly.

A preliminary phonemic analysis of the words incorrectly perceived by the Negro and Caucasian students yielded some systematic differences. A short explanation of each appears below. (The figures at the end give the total number of phonemic substitutions made by the Tuskegee, T, and Auburn, A, students.

1. There was apparently a confusion of /f/ and /θ/ by the Tuskegee students. This is consistent with the findings of Labov (1964), using data obtained from a group of Negro Ss from New York. T-4.

2. Both groups tended to hear the Midwest /ey/ as /iy/; suggesting that rave might be pronounced [reɪəv]. T-16; A-14.

3. There occurred a confusion of front vowels /ɛ/ > /æ/ in such samples as else > Alps and pest > past. The Ss appear to respond with a lower vowel than the Midwest speech sample contains. T-8; A-7.

4. Both southern groups, but especially the Tuskegee students, rather frequently heard a vowel as h + vowel as in air > hair or owls > howls. This may imply that these students are accustomed to an abrupt onset of initial vowels, so that a smooth onset sounds h-like. T-8; A-4.

5. There was considerable confusion in response to Midwest /ə/. The response /a/ usually occurred instead. Examples are nut > not and suck > sock. T-7; A-4.

6. There was a confusion of /æ/ with /i/ before nasals. Two examples produced by the present Ss are tang > ting and jam > Jim. T-8; A-2.

A strong limitation was placed upon the phonemic analysis of the present data by the fact that it was not possible to discern in some cases what "mishearings" or misspellings of certain segments in a word were produced in order to make a meaningful word when mishearings of other segments of the word were made because of dialectical differences. When it was suspected that this was the case, the questionable words were discarded from the phonemic analysis.

## References

Berlin, C. Notes on the Negro dialect. Unpublished notes, Johns Hopkins University, 1965.

Hurst, C. G. *Psychological correlates in dialectololia.* Cooperative Research Project No. 2610. Communication Sciences Research Center, Howard University, 1965.

Labov, W. Stages in the acquisition of standard English. Paper presented at the Conference on Urban School Dialects and Language Learning. Bloomington, Indiana, 1964.

Lane, H. L. Foreign accent and speech distortion. *J. acoust. Soc. Amer.*, 1963, *35*, 451-453.

Levin, N. B. Contrived speech in Washington: The Howard University Sociolect. Unpublished notes, 1965.

Shuy, R. W. Standard English in the urban school. Unpublished paper, Michigan State University, Lansing, Michigan, 1965.

Stevens, S. S., & Beranek, L. L. *Word lists for articulation testing.* Psycho-Acoustic Lab. Harvard University Report No. 1C-26, 1942.

Stewart, W. A. Urban Negro speech: Sociolinguistic factors affecting English teaching. In Proceedings of the Conference on Urban School Dialects and Language Learning, *Natl. Conf. Teachers of English*, 1965.

## Footnote

[1]Several members of the Center for Research on Language and Language Behavior and of Tuskegee Institute contributed to the design, execution, and analysis of this research: Loren Barritt, John C. Catford, Dale Elliott, May Morrison, Ruth Oster, Yura Qualls, Melvyn Semmel, and Sharon Stilo.

Table 1

Cols. 4-9 Correspond to the Lists of Words (A Through E) or Sentences (1 Through 10) Presented Aurally to Each S in Each of the Six Tests of the Experiment. The Direction in Which Each S in the Tuskegee (T) and Auburn (A) Groups Proceeded Through the Tests is Shown in Col. 3; In Cols. 6-9, the (M) Indicates That the Tape Recorded Words or Sentences were Pronounced by the Male GAE Speaker; (F) = Female Speaker.

| SUBJECT | | ORDER OF TESTING | TEST | | | | | |
|---|---|---|---|---|---|---|---|---|
| T | A | | READ SENTENCES | READ LIST | LISTEN-WRITE LIST | LISTEN, SPEAK LIST WORDS IN SENTENCE | LISTEN, SPEAK SENTENCE | LISTEN, SPEAK LIST |
| 1 | 1 | A | 1 - 5 | A | B M | C M | 6 - 10 M | D M |
| 2 | 2 | D | 6 - 10 | B | C M | D M | 1 - 5 M | E M |
| 3 | 3 | A | 1 - 5 | C | D M | E M | 6 - 10 M | A M |
| 4 | | D | 6 - 10 | D | E M | A M | 1 - 5 M | B M |
| 5 | | A | 1 - 5 | E | A M | B M | 6 - 10 M | C M |
| 6 | | D | 6 - 10 | A | B F | C F | 1 - 5 F | D F |
| 7 | | A | 1 - 5 | B | C F | D F | 6 - 10 F | E F |
| 8 | 4 | D | 6 - 10 | C | D F | E F | 1 - 5 F | A F |
| 9 | 5 | A | 1 - 5 | D | E F | A F | 6 - 10 F | B F |
| 10 | 6 | D | 6 - 10 | E | A F | B F | 1 - 5 F | C F |
| 1 | 1 | A | 1 - 5 | A | B M | C M | 6 - 10 M | D M |
| 2 | 2 | D | 6 - 10 | B | C M | D M | 1 - 5 M | E M |
| 3 | 3 | A | 1 - 5 | C | D M | E M | 6 - 10 M | A M |
| 4 | 4 | D | 6 - 10 | D | E M | A M | 1 - 5 M | B M |
| 5 | 5 | A | 1 - 5 | E | A M | B M | 6 - 10 M | C M |
| 6 | 6 | D | 6 - 10 | A | B F | C F | 1 - 5 F | D F |
| 7 | 7 | A | 1 - 5 | B | C F | D F | 6 - 10 F | E F |
| 8 | 8 | D | 6 - 10 | C | D F | E F | 1 - 5 F | A F |
| 9 | 9 | A | 1 - 5 | D | E F | A F | 6 - 10 F | B F |
| 10 | | D | 6 - 10 | E | A F | B F | 1 - 5 F | C F |

Table 2

The Individual and Group Scores Under the Four Methods of Scoring (See Text) for Test III. The Data are Separated by Sex and Race of Ss, with Those for the Tuskegee Students Appearing at the Top of the Table. The Grand Mean Score for Each Group Combines the Male and Female Scores.

TEST III

| SUBJECT MALE | LOWEST SCORE | SCORE COUNTING MISSPELLINGS | HIGHEST POSSIBLE SCORE | SUBJECT FEMALE | LOWEST SCORE | SCORE COUNTING MISSPELLINGS | HIGHEST POSSIBLE SCORE |
|---|---|---|---|---|---|---|---|
| TUSKEGEE | | | | | | | |
| 1 | 42 | 45 | | 1 | 31 | 33 | |
| 2 | 37 | 42 | | 2 | 42 | | |
| 3 | 32 | 34 | | 3 | 40 | | |
| 4 | 44 | 46 | 47 | 4 | 45 | | |
| 5 | 40 | | | 5 | 41 | 42 | |
| 6 | 17 | 20 | | 6 | 42 | | |
| 7 | 41 | | | 7 | 29 | 32 | |
| 8 | 29 | 34 | | 8 | 29 | 30 | |
| 9 | 32 | 34 | 35 | 9 | 39 | 43 | |
| 10 | 31 | 38 | | 10 | 30 | 33 | |
| MEAN | 35 | 38 | 38 | | 37 | 38 | 38 |
| GRAND MEAN | 36 | 38 | 38 | | | | |
| AUBURN | | | | | | | |
| 1 | 43 | 44 | | 1 | 46 | 47 | |
| 2 | 43 | 44 | | 2 | 43 | 44 | |
| 3 | 41 | 42 | | 3 | 43 | 44 | |
| 4 | 46 | 47 | | 4 | 43 | 46 | |
| 5 | 46 | 49 | 50 | 5 | 44 | 45 | |
| 6 | 46 | | | 6 | 42 | 44 | |
| 7 | 42 | 43 | | 7 | 39 | | |
| 8 | 36 | 39 | | | | | |
| 9 | 44 | 45 | 48 | | | | |
| MEAN | 43 | 44 | 45 | | 43 | 44 | 44 |
| GRAND MEAN | 43 | 44 | 44 | | | | |

Table 3

The Individual and Group Scores Under the Four Methods of Scoring (See Text) for Test IV. The Data are Separated by Sex and Race of S, with the Data for the Tuskegee Students Appearing at the Top of the Table. The Grand Mean Score for Each Group Combines the Male and Female Scores. The Data for Female Tuskegee Ss 1 and 2 Were not Analyzed.

TEST IV

| SUBJECT MALE | LOWEST SCORE | SCORE COUNTING MISSPELLINGS | HIGHEST POSSIBLE SCORE | SUBJECT FEMALE | LOWEST SCORE | SCORE COUNTING MISSPELLING | HIGHEST POSSIBLE SCORE |
|---|---|---|---|---|---|---|---|
| TUSKEGEE | | | | | | | |
| 1 | 38 | 39 | 40 | 1 | | | |
| 2 | 40 | 41 | | 2 | | | |
| 3 | 36 | 40 | 42 | 3 | 33 | 38 | 42 |
| 4 | 42 | | 43 | 4 | 35 | 36 | 37 |
| 5 | 37 | 38 | 40 | 5 | 39 | 40 | |
| 6 | 20 | 27 | 28 | 6 | 33 | 35 | 36 |
| 7 | 41 | 42 | | 7 | 28 | 29 | 30 |
| 8 | 41 | 42 | 45 | 8 | 33 | 34 | |
| 9 | 34 | 36 | 39 | 9 | 39 | 40 | 41 |
| 10 | 31 | 34 | ___ | 10 | 32 | 33 | 36 |
| MEAN | 36 | 38 | 39 | | 34 | 36 | 37 |
| GRAND MEAN | 35 | 37 | 38 | | | | |
| AUBURN | | | | | | | |
| 1 | 39 | 41 | | 1 | 46 | 47 | |
| 2 | 45 | 46 | 47 | 2 | 41 | 42 | 43 |
| 3 | 44 | 45 | 46 | 3 | 45 | | |
| 4 | 39 | 42 | | 4 | 49 | | |
| 5 | 46 | | | 5 | 42 | | 43 |
| 6 | 41 | | | 6 | 39 | 42 | |
| 7 | 33 | 34 | | 7 | 33 | | |
| 8 | 39 | | | | | | |
| 9 | 41 | ___ | ___ | | ___ | ___ | ___ |
| MEAN | 41 | 42 | 42 | | 42 | 43 | 43 |
| GRAND MEAN | 41 | 42 | 42 | | | | |

Table 4

The Individual and Group Scores Under the Three Methods of Scoring (See Text) for Test VI. The Data are Separated by Sex and Race, with the Data for the Tuskegee Students Appearing at the Top of the Table. The Grand Mean Score for Each Group Combines the Male and Female Scores. The Data for Female Tuskegee Ss 1 and 2 Were Not Analyzed.

TEST VI

| SUBJECT MALE | LOWEST SCORE | SCORE COUNTING WRONG FORM | | SUBJECT FEMALE | LOWEST SCORE | SCORE COUNTING WRONG FORM |
|---|---|---|---|---|---|---|
| TUSKEGEE | | | | | | |
| 1 | 44 | | | 1 | | |
| 2 | 45 | 46 | | 2 | | |
| 3 | 42 | | | 3 | 44 | |
| 4 | 43 | | | 4 | 44 | |
| 5 | 39 | | | 5 | 43 | |
| 6 | 32 | | | 6 | 35 | |
| 7 | 48 | | | 7 | 40 | |
| 8 | 41 | 42 | | 8 | 32 | 33 |
| 9 | 40 | | | 9 | 41 | |
| 10 | 40 | | | 10 | 38 | |
| MEAN | 41 | 41 | | | 40 | 40 |
| GRAND MEAN | 41 | 41 | | | | |
| AUBURN | | | | | | |
| 1 | 43 | | | 1 | 49 | 50 |
| 2 | 43 | | | 2 | 46 | |
| 3 | 49 | | | 3 | 47 | |
| 4 | 48 | | | 4 | 46 | |
| 5 | 43 | | | 5 | 48 | |
| 6 | 40 | | | 6 | 41 | |
| 7 | 44 | | | 7 | 46 | |
| 8 | 43 | | | | | |
| 9 | 44 | | | | | |
| MEAN | 44 | 44 | | | 46 | 46 |
| GRAND MEAN | 45 | 45 | | | | |